



The Sustainable Development Goals and REDD+: assessing institutional interactions and the pursuit of synergies

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Abstract This paper analyzes potential synergies between two recent sustainable development initiatives, namely the Sustainable Development Goals (SDGs) and reducing emissions from deforestation and forest degradation (REDD+), a climate mitigation mechanism negotiated under the auspices of the United Nations Framework Convention on Climate Change. The paper elaborates a conceptual framework based on institutional interactions and distinguishes core, complementary, and supplementary synergies that may be realized between the SDGs and REDD+. Potential synergies are analyzed at the global level, as well as within two national-level contexts: Indonesia, with its long-standing REDD+ programme, and Myanmar, which is in the early stages of implementing REDD+. Both are now also engaging nationally with the SDG implementation process. Our research draws on literature review and document analysis, direct observations of global policy processes relating to REDD+ and SDGs, as well as extensive engagement (of one author)

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at national level in Indonesia and Myanmar. Our analysis reveals that there are currently significant opportunities to pursue synergies in the implementation of these international initiatives at the national level, although pro-active interaction management is necessary, especially to achieve complementary synergies.

Keywords REDD+ · SDGs · Institutional interaction · Interplay management · UNFCCC · Paris agreement

1 Introduction

The Sustainable Development Goals (SDGs), which came into effect in January 2016, are set to become the main global normative framework on environment and development until 2030. Seventeen SDGs are part of the United Nations 2030 Agenda for Sustainable Development (2030 Agenda). These are intended to guide the pursuit of prosperity and human well-being, while protecting the environment, for the next 15 years. The SDGs identify a range of economic, social, and environmental goals that are intended to form the basis for sustainable development. Like the Millennium Development Goals (MDGs) before them, the SDGs may galvanize global awareness, public pressure, political accountability, and align development finance to measurable targets and indicators (Poku and Whitman 2011; Sachs 2012; Ivanova 2013; Griggs et al. 2014). Thus, they can function as a “report card” for countries to measure their sustainable development performance, now with greater attention to environmental issues than in the MDGs (Sachs 2012; Griggs et al. 2014).

Just before the SDGs came into effect, the Paris Agreement was adopted in December 2015, under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The Agreement entered into force on November 4, 2016, and seeks to limit global temperature increases to 2 °C above pre-industrial levels this century, with the aspiration to limit increases to 1.5 °C. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity-building framework will be put in place, in order to support action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement requires countries to submit plans for how they intend to achieve climate goals, based on their own national circumstances, in “nationally determined contributions” (NDCs). For many countries with significant greenhouse gas (GHG) emissions from forests and land use, NDCs contain forest sector GHG emission reduction goals, and these often contain intentions around forest management and woodfuel use, among others (UNFCCC 2015a, b).

The global climate change mitigation mechanism of REDD+ (“Reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries”) (UNFCCC 2010) is now prominently included in the Paris Agreement. REDD+ is a mechanism to provide readiness finance and results-based payments to developing countries to reduce their GHG emissions from forest loss. Negotiations over this mechanism within the UNFCCC culminated in the 2013 Warsaw Framework on REDD+, a package of decisions to help countries implement REDD+, including development of national strategies or action plans, as well as national forest monitoring systems, forest reference emission levels, measuring, reporting and verification

(MRV) systems, social and environmental safeguards, and recognition of the need to address the drivers of deforestation and forest degradation in order to achieve emissions reductions. Further negotiations to agree on the implementation framework for REDD+ were completed in 2015 (UNFCCC 2015a, b).

Over the years, REDD+ has expanded substantively from being, originally, an international finance mechanism for avoided deforestation to recognizing that success in achieving REDD+ outcomes depends on addressing the drivers of deforestation and forest degradation, which in many countries requires a shift in rural economic engines of growth (e.g., commercial agriculture, mining, infrastructure development) toward more low carbon pathways (Kissinger et al. 2012). Addressing drivers requires that countries seek national policy adjustments as well as “non-carbon benefits” while securing reduced GHG emissions from the forest sector (Visseren-Hamakers et al. 2012a; Den Besten et al. 2014; Weatherley-Singh and Gupta 2015).

Governance for sustainable development has arguably entered an “era of synergies” (Visseren-Hamakers 2015), where the growing density and complexity of multilateral environmental agreements and other international institutions have resulted in increasing attention to how they influence one another and the governance architecture as a whole (Oberthür and Gehring 2006; Biermann et al. 2009; Zelli and van Asselt 2013). We contend that for both REDD+ and SDGs to achieve their intended outcomes, it is important to identify linkages, including trade-offs and synergies, at national and sub-national levels.

Our aim here is to analyze potential areas of interaction between REDD+ and the SDGs. We examine how these initiatives relate to one another at their norm-setting and rule-making stages and, given their objectives, what synergies are identifiable, and how these synergies can be pursued and enhanced. We acknowledge that there will be conflicts and trade-offs in national-level processes of implementing REDD+ and the SDGs, as both require adjustments in development pathways. However, our current analysis focuses specifically on analyzing areas of convergence and synergy. Our assessment is based on secondary literature, as well as direct observations of REDD+ negotiations at the UNFCCC (including on non-carbon benefits of REDD+), as well as primary document analysis of UNFCCC decisions on REDD+ and negotiation of the SDGs as part of the 2030 Agenda for Sustainable Development. The national-level illustrative case studies of Indonesia and Myanmar draw on primary documentation and extensive engagement (by one author) with a wide array of decision-makers and stakeholders in each country relating to implementation of the SDGs, green economy pathways and REDD+ in these two countries (UN Environment 2017a and 2017b, forthcoming).

The article is structured as follows. Section 2 provides an overview of the institutional interaction literature, based upon which we then elaborate our own analytical framework to assess types of institutional interactions and the prospect for synergies therein. Section 3 explores the normative and institutional synergies between the SDGs and REDD+. Section 4 briefly considers such potential synergies and their realization in two national contexts: Indonesia and Myanmar. Section 5 analyzes the mechanisms of interaction, and options for interaction management as means to enhance synergies between REDD+ and SDGs. Finally, Sect. 6 draws conclusions.

2 A framework for analyzing institutional synergies

It is by now a consensus that the environmental governance architecture is increasingly dense and complex (Oberthür and Gehring 2006; Biermann et al. 2009; Visseren-Hamakers 2015), including various public, hybrid (public–private) and private principles, norms, rules and decision-making mechanisms in place at multiple governance scales to steer human behavior (Krasner 1982; Young 2008; Visseren-Hamakers 2013). Complexity emerges because such institutions exert influence over one another, with consequences for governance outcomes (Oberthür and Stokke 2011). The strategic management of institutional interactions (or interplay) has thus also received growing attention from environmental governance scholars (see Young 1996; Raustiala and Victor 2004; Oberthür and Gehring 2006; Biermann et al. 2009; Zelli and van Asselt 2013; Gupta et al. 2015; Visseren-Hamakers 2015) and in policy circles (see Soria 2014).

Institutions may interact in different ways. A given institution might be *embedded* in a larger institutional framework of overarching principles and norms that covers many different issue-areas. It might alternatively be *nested*, in a hierarchical relationship, within a higher—and usually less specific—institution in the same issue-area. It may find itself *clustered* with others in an institutional “package.” It might *overlap* on a de facto basis with other institutions that target different issue-areas. Or it may operate in *parallel* with other institutions targeting the same issue-area that may have been created separately and have no formal relationship but still influence one another (Young 1996; Abbot and Snidal 2006; Oberthür and Gehring 2011; Zelli et al. 2013). Whichever the case, institutions influence the development or performance of other institutions at various stages of emergence and evolution. Such stages include: institutional *outputs* (rules or other formal signs of compliance), *outcomes* (changes in human activities), and *impacts* (tangible changes in environmental quality or other ultimate goals of an institution) (Underdal 2008; Oberthür and Gehring 2011).

There are different mechanisms through which such institutional interactions can occur. As a general rule, such interactions modify the perceptions, preferences and behaviors of key actors (Gehring and Oberthür 2009). First, there may be “cognitive interaction” when ideas or information from one institution filters into the process of another and influences its outputs. Second, normative or legal commitments to one institution may affect decision-making and output creation in another. Third, there might be interaction at the level of outcomes, when different institutions influence the behavior of the same actors. Fourth, there may be impact-level interactions or “functional linkages” (Young 2002), when the ultimate targets of the two institutions are related (e.g., a policy aimed at conserving bamboo forests may ultimately benefit panda conservation and, as such, interact at the impact level with policies aimed at the latter) (Oberthür and Gehring 2011).

That said, conceptualization with respect to the *quality* of these interactions remains relatively limited. Institutional interactions usually are broadly categorized as being synergistic (when they result in improvements in effectiveness, i.e., an institution’s ability to reach its objectives), neutral, or conflictive (or disruptive, i.e., when one institution hinders the effectiveness of another). We recognize, however, that institutions often have multiple objectives. These objectives may not all belong to an institution’s core mission—some may rather be regarded as potential “co-benefits.” The discussion on various non-carbon benefits from REDD+, for example, is a case in point. REDD+’s main objective is to reduce GHG emissions from the forest sector, and its results are to be measured, verified, reported and financed on the basis of tonnes of CO₂-equivalent per year. However, to

succeed in reducing forest sector emissions, countries need to put in place and implement changes in current land-use patterns both within the forest sector (e.g., reductions in annual allowable cut, fuel switching away from fire wood) and outside (e.g., relating to commercial agriculture and its expansion into forests). This requires coordination and agreement with sectors exerting pressure on forests, and requires evaluation and adoption of more sustainable land-use practices (Bastos Lima et al. 2017). Further, REDD+ has explicitly sought to generate other positive impacts such as biodiversity conservation, governance improvements, and socioeconomic benefits (UNFCCC 2010, 2015a, b; see also Bastos Lima et al. 2014). Such objectives, in turn, imply the existence of a range of synergy types, each with different characteristics that influence how they may be reaped.

As such, we conceptualize three different types of institutional synergies here. We call *core synergies* those in the realm of two institutions' core objectives, here understood as the ones related to their main missions and on the basis of which they are most likely to be assessed (e.g., the Montreal Protocol and reduction in the production of substances that deplete the ozone layer). We posit that, given the centrality of such core synergies, institutional interactions have the potential to yield mutual gains. Moreover, given the functional linkages between their overlapping (or same) objectives, impact-level synergies are likely to spontaneously materialize. Still, risks exist, such as the eventual duplication of efforts, dilution of resources, or misalignment of policy instruments in case the two institutions are not streamlined during implementation (see Stead and Meijers 2009).

Complementary synergies refer to a situation where the pursuit of co-benefits foreseen by one institution helps achieve core objectives or co-benefits also sought by another institution. These synergies are limited to benefits that are intended by the institutions and, thus, regarded as a constituent part of them. They may be overlooked, however, given that they are not related to mandatory objectives, and thus require conscious pursuit and greater attention. In other words, complementary synergies are less likely to materialize spontaneously than core synergies. Additional policy-making may be required to pursue these, while not doing so may incur opportunity costs.

Supplementary synergies refer to interactions involving unforeseen co-benefits, which are not explicitly part of the institutional "package"—and thus cannot be demanded from it—but can still be regarded as positive if attained. For instance, REDD+ does not foresee—and is unlikely to be judged on the basis of—its benefits to formal education, yet it is conceivable that REDD+ implementation may create such benefits in specific contexts, and help to further implementation of SDGs targets on education. We posit that these synergies are less likely to be consciously pursued than the other two types noted above, and not pursuing them may create fewer opportunity costs. Still, they can be significant in certain contexts (e.g., following the example above, as in regions where improvements in education are urgently needed and any missed opportunity can be important).

Our primary hypothesis is that synergies will not necessarily occur on their own, but must be sought by countries in order to maximize the benefits, efficiencies and increased likelihood of success in implementing both REDD+ and SDGs. In addition, while it may be more logical to pursue core synergies, complementary synergies may also deliver significant benefits. Table 1 summarizes this typology of institutional synergies. While we focus on synergies here, we recognize that any discussion of synergies must also recognize the existence of conflict and trade-offs, with conflicting sectoral goals making it challenging to pursue sustainable development.

The following sections apply this framework to the case of interactions between REDD+ and the SDGs. In doing so, we identify the core objectives and intended co-

Table 1 Typology of institutional synergies. *Source* developed by the authors

		Institution 1		
		Core objectives	Foreseen co-benefits	Unforeseen co-benefits
Institution 2	Core objectives	Core synergies		
	Foreseen co-benefits	Complementary synergies		
	Unforeseen co-benefits	Supplementary synergies		

benefits of the two institutions, and analyze where and how synergies have emerged or may emerge. With this, we focus the analysis on core and complementary synergies.

3 REDD+ and the SDGs: objectives and prospects for synergies

A number of similarities make interactions between REDD+ and the SDGs likely. Despite having emerged from distinct institution-building processes, both initiatives aim, either as a whole (in the case of REDD+) or in part (in the case of the SDGs), at sustainable management of forests and mitigation of climate change impacts. Two SDGs are most compatible with REDD+ objectives of “reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.” These include SDG 13, which calls for, “urgent action to combat climate change and its impacts” and SDG 15, which aims to, “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.”

Moreover, countries participating in REDD+ are developing forest “reference emissions levels,” which constitute the baseline level of emissions against which change can be measured. Countries will measure forest cover change and changes in carbon stocks as part of their national forest monitoring and MRV systems, and will submit the information to the UNFCCC. The SDGs indicators have now been completed, and indicator 13.3.2 under SDG 13 will measure how countries are strengthening institutional, systemic and individual capacity building to pursue climate adaptation, mitigation, technology transfer, and development actions. Two indicators for SDG 15 are relevant to our analysis as well: indicator 15.1.1 to measure forest area as a proportion of total land area and indicator 15.2.1 to measure progress toward sustainable forest management (UN 2016a).

So far, work to refine the data compilation sources from national governments and international agencies indicates that the same source of information used to assess country progress on maintaining forest cover and carbon stocks will be used in assessing progress on SDG 15, namely the information provided by governments to the UN Food and Agriculture Organization’s global forest resources assessment. This assessment includes annual average percent change in forest area, annual average percent change in stock of carbon in above-ground biomass, the share of forest area whose primary designated function is biodiversity conservation, the share of forest area under a forest management plan, and how much forest area is certified under an independent forest management certification scheme (UNSD 2016).

Both REDD+ and the SDGs recognize that achieving their objectives will require transformational changes in natural resource management. The Cancún Agreements on REDD+ indicate that when developing REDD+ National Strategies or Action Plans, countries should address the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations, social and environmental safeguards, and ensure the full and effective participation of relevant stakeholders, including indigenous peoples and local communities (UNFCCC 2010). Similarly, countries reporting on their SDGs performance are encouraged to report on how the three dimensions of sustainable development (economic, social, and environmental) are being integrated, and how sustainable development policies are being designed and implemented to reflect such integration. Other principles of the 2030 Agenda are also encouraged to be mainstreamed in the implementation of SDGs, such as “leaving no one behind” (UN 2016a).

The combination of the three dimensions of sustainable development (economic, social, and environmental) can indeed be considered transformational, and indications from the first country submissions on SDG implementation indicate that very few countries are able to address all three synergistically (including recognized global leaders, such as Finland and Germany). This indicates a gap in countries’ abilities to tackle sectoral integration in their SDG implementation and reporting (UKSSD and Bond 2016). This is a notable shift from the MDGs, the precursor to the SDGs. The SDGs embrace environmental sustainability concerns across all goals, whereas in the MDGs, these concerns constituted a separate, seemingly dissociated goal (ICSU/ICSS 2015). This demonstrates formal recognition within the SDGs of currently unsustainable activities across various economic sectors that need to change in light of environmental and social concerns (Young et al. 2014). Furthermore, the SDGs include some essentially transversal goals that deal with structural issues, such as addressing domestic and international inequalities (SDG 10) and the promotion of sustainable production and consumption while promoting inclusive and sustainable economic growth (SDG 12) (ICSU/ICSS 2015; Lang and Lingnau 2015). Such a focus recognizes that economic, environmental, and social sustainability are all interconnected and crucial for sustainable development. Thus, the SDGs now explicitly call for transformation of the structures that lead to marginalization and environmental degradation (Gupta et al. 2014; Young et al. 2014).

In recognition of the transformational objectives of the SDGs and REDD+, both also call on implementing governments to pursue inclusive processes, involving stakeholders, civil society, the private sector, sub-national authorities, local communities, and indigenous peoples. This call for inclusive processes is common to both and provides a basis to pursue social and environmental safeguards as well.

There is no hierarchy between the 17 SDGs; all 17 goals are regarded as equal and an indivisible whole (UN General Assembly 2015). In the case of REDD+, however, there is a clear hierarchy between carbon and non-carbon objectives in the forest sector. Therefore, it is possible to distinguish core and complementary objectives in REDD+ policy, based on foreseen co-benefits. Table 2 outlines the 17 SDGs, and related core and complementary REDD+ objectives.

It is important to note that both the REDD+ framework and the SDGs are not binding for countries, but they both create incentives to meet their objectives. REDD+ provides economic incentives (payments for results), while the SDGs reflect political commitment and normative obligations, as did the MDGs (Loewe 2012).

While REDD+ is to be implemented in developing countries, the SDGs are universal in coverage. Nevertheless, the 2030 Agenda for Sustainable Development, which launches the SDGs, *does* recognize the North–South gap, in reaffirming requests for finance,

Table 2 SDGs and related REDD+ objectives. *Source* compiled by authors

SDGs	REDD+ objectives (as embedded in specific UNFCCC decisions)	Synergies
1. End poverty in all forms everywhere	(REDD+ activities should) be implemented in the context of sustainable development and reducing poverty, while responding to climate change [1/CP.16, Appendix I, 1 (g)]	Complementary
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	[1/CP.16, Appendix I, 1 (g)]	Complementary
3. Ensure healthy lives and promote well-being for all ages	—	
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	—	
5. Achieve gender equality and empower all women and girls	Agrees that systems for providing information on how the safeguards referred to in appendix I to decision 1/CP.16 are addressed and respected should, taking into account national circumstances and respective capabilities, and recognizing national sovereignty and legislation, and relevant international obligations and agreements, and <i>respecting gender considerations...</i> (12/CP.17, I, 2)	
6. Ensure availability and sustainable management of water and sanitation for all	Conservation of ecosystem services as part of guidance on safeguards (1/CP.16)—indirectly could help countries maintain watershed integrity	Complementary, depending on role of watershed management
7. Ensure access to affordable, reliable, sustainable and modern energy for all	Encourages all parties to consider the entire sinks and reservoirs of greenhouse gas while developing the nationally appropriate mitigations actions (1/CP.21). For countries with a significant contribution of forest degradation (and GHG emissions) from wood fuels, this should be considered	Complementary, depending on role of fuelwood
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	—	
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	—	

Table 2 continued

SDGs	REDD+ objectives (as embedded in specific UNFCCC decisions)	Synergies
10. Reduce inequality within and among countries	Urges developed country Parties, to support, through multilateral and bilateral channels, the development of REDD+ national strategies or action plans and implementation (1/CP.16)	Complementary
11. Make cities and human settlements inclusive, safe, resilient and sustainable	–	
12. Ensure sustainable consumption and production patterns	Reduce the human pressure on forests, including actions to address drivers of deforestation (1/CP.16)	Complementary
13. Take urgent action to combat climate change and its impacts	Reduction in emissions from deforestation and forest degradation; enhancement of forest carbon stocks (9/CP.19) Address the drivers of deforestation (15/CP.19)	Core
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	–	
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Reducing emissions from deforestation in developing countries: approaches to stimulate action (2/CP.13)	Core
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	Institutional building (National Forest Monitoring Systems, Safeguard Information Systems, etc.), with full and effective participation of all relevant stakeholders (1/CP.16; 11/CP.19)	Complementary
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	To provide finance and technology to developing countries to support emissions reductions (1/CP.16) Be supported by adequate and predictable financial and technology support, including support for capacity-building [1/CP.16, Appendix I, 1 (i)]	Complementary

technology, and capacity-building support to flow from North to South, i.e., from developed to developing countries (UN General Assembly 2015). The Agenda further specifies that efforts to achieve SDGs are not confined only “within our own countries,” but also “at the regional and global levels” (UN General Assembly 2015, paragraph 21). There is a clear understanding that some countries may not be able to do it alone, and the SDGs seek to diminish the inequalities between the rich and poor (SDG 8), and promote a partnership that brings together governments, civil society, the private sector, the United Nations system and other actors to realizing the Agenda (SDG 17). In short, this new universality

expands worldwide normative requirements to pursue sustainable development hitherto placed only on developing countries in the earlier MDGs and effectively demands that developed countries work *both* within their boundaries *and* assist developing countries to achieve the SDGs. This obligation for developed countries to support developing countries is mirrored in the Paris Agreement and in REDD+.

In summary, core synergies are those that have clear overlap in goals, which is evident between REDD+ and SDG 13 (climate) and SDG 15 (sustainable use of terrestrial ecosystems and management of forests). Complementary synergies are those where pursuit of co-benefits foreseen by one institution helps achieve core objectives or co-benefits also sought by another. Thus, for example, water, poverty, and even responsible production and consumption SDGs can promote co-benefits in REDD+.

4 Realizing synergies at the national level

We briefly explore potential for core and complementary synergies between REDD+ and SDGs in two countries, Indonesia and Myanmar, both of which are now implementing REDD+ at the national level and are signatories to the Paris Agreement, with submitted NDCs.

4.1 Indonesia

Indonesia's launched REDD+ with a Presidential commitment to the initiative in 2009. The country's REDD+ Readiness Plan was submitted in 2010 and the REDD+ National Strategy finalized in 2012. Norway made a critical US \$1 billion bilateral commitment to support Indonesia's REDD+ readiness activities and as a payment for emissions reduction results in 2010 (Royal Norwegian Embassy Jakarta 2016). In September 2015, Indonesia submitted its Intended Nationally Determined Contribution (INDC) to the UNFCCC Conference of the Parties, reinforcing its 2009 commitment to a 26% emission reduction by 2020 and 29% emission reduction by 2030, based on a 2010 projected business as usual scenario (Indonesia 2015).

Addressing forest sector emissions, including land and land-use change, peat and forest fires, which contribute 63% to the country's overall emissions (as per Indonesia's Second National Communication to the UNFCCC 2010), will be crucial to meet its NDC targets. However, high incidences of peat fires and plans for increased palm oil production to meet recent biodiesel market expansion will jeopardize those goals, unless Indonesia can bring greater coherence to its land-use activities. Oil palm production is a major driver of deforestation in Indonesia. While a key driver, the oil palm sub-sector in Indonesia contributes 4.5% of GDP, and smallholders account for roughly half of production. Therefore, interventions to address GHG emission reductions must also consider livelihoods of smallholder producers (among others) (UN Environment 2017a, forthcoming).

Drawing on Indonesia's experience and institutional arrangements for the MDGs, the country established a SDG Transition Secretariat in the Ministry of National Development Planning (Bappenas). Indonesia sorted the SDGs goals, targets, and indicators into four pillars: social, economic, environment (including both Goals 13 and 15), and law and governance. Bappenas performed a mapping exercise to assess SDGs against the goals and targets of the medium-term development plan (RPJMN), identifying 108 out of 169 matches. Technical Guidelines for the SDG Action Plan have been completed, and it is

expected that in 2017, Indonesia will complete a National SDG Roadmap and define national and sub-national SDG actions (Indonesia 2016). Based on interview results, the government sees the primary strength of the SDGs as providing a means to promote the interconnectedness between sectors, and to further refine how coordinated public sector interventions can better enable supportive private sector investment for positive SDG outcomes. Based on the authors' review of the processes evolving to implement REDD+ and SDGs, the National SDG Roadmap is the process that should define the specific alignment in core objectives, and it is expected that many complementary objectives between SDGs and the RPJMN will also be relevant in the land-use sectors.

4.2 Myanmar

Myanmar's INDC, submitted to the UNFCCC in 2015, reiterates Myanmar's 30-Year National Forestry Master Plan goals of achieving 30% of the land area being within the permanent forest estate, and 10% of the land area being within protected areas by the year 2030. The INDC also seeks to increase the number of energy-efficient cook stoves to reduce the amount of fuel wood used for cooking, through distribution of 260,000 cook stoves in the Dry Zone (Republic of the Union of Myanmar 2015). The INDC commitment provides a key means to achieve REDD+ objectives, which Myanmar has articulated since first joining the UN-REDD Programme in 2011 (UN Environment 2017b, forthcoming).

Myanmar's economy is largely based on agricultural production, which contributes about 30% of GDP and more than 60% of employment. Production and yields are low compared to other countries in the region, and Myanmar increasingly relies on foreign direct investment to help grow its economy after decades of military rule and isolation. Recognizing the importance of its forests, a temporary logging ban is in effect while the forest sector reforms. A National Land Use Policy, finalized in late 2015, provides a window of opportunity to provide greater certainty in tenure and land use, particularly for farmers and ethnic regions (containing the most intact forests), many of which are involved in peace negotiations with the government in order to reach a national ceasefire and cessation of conflict (UN Environment 2017b, forthcoming).

Though Myanmar is still in the initial stages of its REDD+ Readiness activities and in considering how to integrate SDGs into national development planning, there are significant opportunities to pursue core synergies. This rests largely on the political momentum behind its transition toward democracy and the new national-level institutions that are emerging, which are far more compatible with both REDD+ and SDGs goals than previous institutions were.

5 Mechanisms of interaction and options to realize synergies

The SDGs, like the MDGs before them, are a *sui generis* institution. On the one hand, they constitute an overarching normative framework covering many issue-areas and are meant to orient sustainable development policy at national levels, and globally, for the next 15 years. Thereby, we argue here that REDD+ (being *nested* into the Paris Agreement) could potentially become *embedded* into the SDGs during the implementation phase, since REDD+ can help to realize specific SDGs. For example, countries can pursue SDG 13 in proposing and implementing forest-related climate actions under REDD+, as well as advance SDG 15 by participating in the UNFCCC process. As Young (1996) notes, such

processes of embeddedness are usually unintentional, but they can have important consequences. In this case, countries implementing REDD+ may choose to do so in ways that also help them further the implementation of various SDGs. But there is no specific mechanism or institutional linkage that would direct countries to pursue such coherence. Therefore, the risk is that REDD+ could stand in *parallel* with the ambitions of the SDGs in some contexts, if policymakers do not make the linkages explicit, based on their national circumstances and national-level implementation frameworks. Further, the SDGs have no hierarchy over more specific institutions such as REDD+ (therefore, REDD+ will only be nested within SDGs if countries chose to rely on REDD+ as, for example, a means of implementing certain SDGs). Indeed, the 2030 Sustainable Development Agenda explicitly recognizes the UNFCCC as being non-subordinate to the SDGs (UN General Assembly 2015).

Though those negotiating the SDGs regarded REDD+ primarily as a means of implementation, more precisely, as a source of financial support to pursue SDG targets related to forests and land use, and not necessarily as a source of ideas or information (Brack 2014),¹ this may change as countries pursue implementation frameworks. Colombia, for example, has chosen to pursue “green growth” as an overarching strategy in development of its National Development Plan, to be renewed in 2018, and thus places its commitment to forests and biodiversity as a core component of cross-sectoral strategies, such as transformation of rural areas (Colombia 2014).

There remains considerable scope for behavioral (outcome) and impact-level interactions. The commitment to achieving SDG targets related to, for example, sustainable agriculture, poverty and inequality reduction, gender equity, or energy access can substantively affect perceptions, preferences, and policy choices in the context of REDD+ implementation. Likewise, the availability of REDD+ as a prompt means to undertake forest conservation strategies in an internationally accredited manner can influence how certain SDGs are pursued. While some synergies may materialize spontaneously at the level of impacts, there is much room for enhancing them through (behavioral or outcome-level) interaction management.

A first step in doing so is to identify the core synergies, in order to identify synergistic approaches to pursuing outcomes and impacts. For instance, Myanmar could position its REDD+ goals within a broader SDG framework and thereby identify the core synergies to help meet SDGs 13 and 15, help supplement and support synergies in implementing SDG 17, and further identify complementary synergies to address the root causes of rural poverty, which are crucial for Myanmar’s engagement in the SDGs (Aye 2016). These complementary synergies could include efforts to fulfill SDG 1 on poverty, sub-goal SDG 1.4, which seeks to ensure that men and women, including the poor and vulnerable, have equal rights to economic resources, ownership and control over land and natural resources. Myanmar is seeking solutions to that issue in order to resolve the long-standing civil conflicts in ethnic regions, and held the historic Union Peace Conference—twenty-first-century Panglong Conference, with eighteen ethnic insurgent groups. If Myanmar can achieve national reconciliation and union peace, it will be poised to settle long-standing disputes over land and natural resources, thereby directly addressing the poverty and isolation in these mostly forested regions (UN Environment 2017b, forthcoming).

Such synergies may well be realized if human, financial, and administrative resources are streamlined—or hindered if not. This does not necessarily require the concentration of

¹ Interviews with civil society observers at the Open Working-Group negotiations of the SDGs in 2014 and 2015.

responsibilities, but does imply that implementation efforts are coordinated and coherent, to avoid duplication of efforts, inefficient use of resources, or (domestic) normative ambiguity (Brown Weiss 1993; Alter and Meunier 2009; Oberthür and Stokke 2011). For instance, if the pursuit of SDG 15, with targets on forest conservation, sought an increase in carbon storage (such as through delineation of new national parks) without stakeholder engagement and/or commitment to the emerging REDD+ National Strategy, with MRV systems to monitor performance and impacts, there would be inherent risks (see also Gupta et al. 2012; Vijge and Gupta 2014). However, the REDD+ readiness efforts are creating the stakeholder engagement, vetting of implementation options, analytics for decision-support, and systems of information and monitoring that could implement SDG components relating to the forest and land-use sectors.

This points to the importance of *autonomous interaction management* in this context, i.e., interaction management at the implementation level, done autonomously by governments and/or non-state actors involved with the institution in question (Oberthür 2009). Alternative means of interaction management could, in principle, include the creation of an overarching institution, or adjustments made jointly or unilaterally at the international level (Oberthür and Gehring 2011). However, these modes of interaction management are less relevant in the case of the SDGs and REDD+. If the MDGs are a precedent to go by, it is instructive that they remained unchanged for 15 years, despite critiques (such as on the absence of a goal on improving energy access, which later led the UN to argue that energy access actually underscored all goals; see Kuik et al. 2011).

REDD+, too, seems unlikely to have its rules revised in the near future, before some implementation experience has been gathered. Finally, some have suggested the new UN High-Level Political Forum on Sustainable Development, successor of the UN Commission on Sustainable Development, could be an “orchestrator of orchestrators” and work to develop synergies between the SDGs and other international institutions or initiatives (Bernstein et al. 2014). However, even if this were to occur, countries would retain ample autonomy. Given their own national circumstances, and the spectrum of implementation options available, countries are best positioned to carry out autonomous interaction management at the national level.

At the same time, autonomous interaction management need not be done exclusively by national governments in charge of both REDD+ implementation and progress on the SDGs. Various other actors (e.g., sub-national entities, civil society, donor countries, the private sector) may seek to help manage those interactions and generate synergies. As Sachs (2012) observes, private companies are responsible for key production processes that drive deforestation (notably agriculture), which may be altered even if those companies are not directly accountable for achieving the SDGs. The private sector also owns much technology and innovation capacity needed for sustainable development (Hajer et al. 2015), so their commitment to supporting SDGs and REDD+ goals and targets is important in sectors that drive deforestation impacts. The scientific community, too, plays a significant role, particularly if governments increase their efforts to make data available and accessible (Lu et al. 2015).

As such, it is possible to understand interaction management not necessarily as an *ex post* exercise, i.e., as a reactive process in the face of “treaty congestion” (Brown Weiss 1993). Rather, it may include the deliberate pursuit—indeed, the creation—of interactions for the sake of building synergies. In our case, while REDD+ may indeed provide a means to help achieve SDGs, the SDGs may in turn offer a politically powerful additional rationale for pursuing multiple objectives (namely the various non-carbon benefits) in REDD+ actions. This is where complementary and, eventually, supplementary synergies

could be created. Since these involve non-essential—and yet achievable—additional benefits from REDD+, however, these synergies demand conscious pursuit and active policy-making for their promotion.

The role of monitoring and evaluation in interaction management is crucial in order for governments and stakeholders to establish baselines, monitor implementation, and correct course as necessary. Monitoring and evaluation was identified as an important, yet insufficiently developed process in Indonesia's MDG implementation, and therefore a priority in the SDG process. Indications are that a SDGs database will be established in Bappenas to house data from various ministries, agencies, and stakeholders (CSOs, private sector, etc.) to support the monitoring and analysis of progress and gaps. The utility of this could be enhanced if it incorporates and builds upon the One Map initiative, being carried out by the National Geospatial Agency, which seeks to harmonize spatial information across all key sectors and ministries on land use, land tenure and other spatial information. Information provided through One Map² will be crucial for purposes of implementing and monitoring efforts to reduce GHG emissions from forests and peat lands, as well as associated rural and socioeconomic interventions. Such information can be a crucial first step in interaction management and the pursuit of synergies.

We should also note here the potential trade-offs and risks of conflict between the SDGs themselves (e.g., economic growth and climate change mitigation; see Brack 2014), and between REDD+'s carbon focus and its co-benefit aspirations. Trade-offs also require policy choices (Vandemoortele 2009). A balancing of multiple objectives is needed in order to meet various SDG targets and for REDD+ actions to have broader sustainability impacts, not least because these objectives are highly interdependent (Visseren-Hamakers et al. 2012b). Carbon permanence and the long-term sustainability of REDD+ actions depend on minimizing the risks of reversals, which in turn requires addressing, among others, local socioeconomic needs (Jagger et al. 2014). Likewise, there is a clear interdependence between several SDGs (e.g., universal food security depends on ending poverty; the conservation of forest and other terrestrial ecosystems may depend on the adoption of sustainable agriculture, and so on; see ISCU/ICSS 2015). The creation of complementary and/or supplementary synergies, in turn, depends on understanding—and effectively managing—such various dimensions and their relationships.

6 Conclusions

This article has elaborated on the concept of institutional synergies and analyzed interactions between REDD+ (as recently included within the Paris Agreement) and the SDGs. The adoption of the SDGs as an overarching, multi-sectoral normative framework clearly adds further density to an increasingly complex global environmental and sustainability governance architecture, and we argue here that REDD+ can be regarded as embedded into this framework at the global level. However, if, on the one hand, the increasing complexity creates challenges in the form of greater need for interplay management, on the other hand, more opportunities emerge for pursuing synergies. We distinguished between three different synergy types—core, complementary, and supplementary synergies—each with different characteristics that influence how they might be reaped.

Our findings suggest that interactions between REDD+ and the SDGs at the output level (that is, either in the form of cognitive interaction or interaction through commitment)

² Refer to: <http://www.bakosurtanal.go.id/>.

are beginning to take shape in some countries, with Indonesia as an example. Both case studies provide more insight into how such output-level interactions could be furthered, and how behavioral and impact-level interactions can be promoted. Our brief illustration of the evolving situation in Myanmar and Indonesia illustrates that REDD+ has the potential to become embedded in, but also to operate in parallel with, certain SDG targets. While REDD+ provides a viable, internationally accredited means of implementing certain SDG targets, the SDGs in turn offer a politically powerful additional rationale for expanding REDD+ actions beyond its core carbon-related objectives at national levels.

SDGs related to climate change mitigation (SDG 13) and forest conservation (SDG 15) relate intrinsically to central objectives of REDD+. These are *core* synergies that can materialize spontaneously at the level of impacts; yet, autonomous interaction management is important to streamline their implementation and reduce risks of duplication, inefficient use of resources, or normative dissonance at the domestic level. These synergies will not necessarily occur on their own, as we hypothesize, but countries can pursue such synergies in order to maximize the benefits, efficiencies, and increased likelihood of success in implementing both REDD+ and SDGs. Furthermore, we find that complementary and supplementary synergies may also deliver significant benefits. Securing *complementary* and *supplementary* synergies requires active promotion of non-carbon benefits in REDD+ actions. Also, the goals of accountable and inclusive institutions at all levels (SDG 16), and strengthening the means of implementation and revitalization of global collaboration for sustainable development (SDG 17) are intentions that are highly synergistic with REDD+. Our analysis suggests that to pursue core, complementary, and supplementary synergies in implementation of the SDGs and REDD+, there is a need for pro-active synergy building rather than reactive interaction management, as these institutions do not in and of themselves provide a roadmap on how to identify and pursue linkages (although reporting mechanisms are showing signs of guidance and alignment).

In summary, our framework distinguishing between core, complementary, and supplementary synergies should help in differentiating areas where synergies are clearest, and those where pro-active interaction management will be necessary in order to achieve synergies. Our analysis has identifying potential synergies as a means to encourage countries to identify these early on in implementation processes for both SDGs and REDD+, based on national circumstances. In essence, both the SDGs and REDD+ aim for sustainable development and hence seek to redirect current unsustainable practices. Nurturing potential synergies is necessary in order for the SDGs and REDD+ to achieve their transformative potential.

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